Expertise France

Duration: May 7th to May 27th, 2023
Location: Rwanda

Introduction
Siemens Centre had an opportunity to conduct a training program in Rwanda,contracted by Expertise France. This training aimed to equip participants with a comprehensive understanding of Supervisory Control and Data Acquisition (SCADA) systems, Programmable Logic Controller (PLC) programming, and the effective conveyance of data from Remote Terminal Units (RTUs).

Target Audience
The participants in this training were educators from the Institute of Polytechnics, Ruhengeri (IPRC) Tumba. These dedicated teachers were eager to acquire the knowledge and skills necessary to teach SCADA systems, PLC programming, and data communication to their students. Their commitment to improving technical education in Rwanda was commendable.

Topics covered:

1. **Matlab**: Matlab is a high-level programming language and environment used for numerical computing, data analysis, and algorithm development. In the context of the training program, participants likely learned how to use Matlab for various engineering and control system applications.

2. Control Systems: Control systems are used to manage and manipulate the behavior of systems or processes. Participants likely learned about different types of control systems, such as open-loop and closed-loop systems, and how to design, analyze, and optimize them.

3. **Calibration**: Calibration is the process of adjusting and verifying the accuracy and precision of measurement instruments and sensors. In the training, participants may have learned the principles and techniques of calibration for various instruments used in industrial and **engineering settings.**

4. **Supervisory Control and Data Acquisition (SCADA) Systems**: SCADA systems are used for monitoring and controlling industrial processes. Participants likely received training on how to set up, configure, and operate SCADA systems, which play a critical role in industrial automation.

5. **Programmable Logic Controller (PLC) Programming**: PLCs are industrial computers used for controlling manufacturing processes and machinery. Participants may have learned how to program and troubleshoot PLCs, which are essential components in industrial automation and control.

6. **Remote Terminal Units (RTUs):** RTUs are devices used to collect and transmit data from remote locations to a central control system. Participants likely learned about the functions and communication protocols associated with RTUs and how to effectively convey data from them to the central control system.